



Surgery

UNCOMPLICATED MECKEL'S DIVERTICULUM. DOES IT REALLY NEED RESECTION?

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ABSTRACT **BACKGROUND:** Meckel's diverticulum is present in 2% of population and it is commonly found as an incidental finding during emergency laparotomy or in inguinal hernia surgeries. The presentation varies from mere asymptomatic to life threatening haemorrhage or a potential site for harbouring tumours. Littre's hernia is characterized by MD in hernia sac located in one of the inguinal, umbilical, femoral, ventral, sciatic and lumbar hernia sacs and it is a big surprise for operating surgeon and great challenge to decide whether to resect or leave it? The external appearance and palpation of MD does not indicate towards presence of heterotopic mucosa of gastric or pancreatic origin.

CASE REPORT: We are reporting a case of 55 years old gentleman who presented with right sided complete irreducible inguinal hernia containing MD as content of inguinal hernia sac. Though the MD was asymptomatic but we performed simultaneous wedge resection of MD with primary suturing along with Lichtenstein mesh hernioplasty. The emphasis in reporting this case is to talk about surgical resection of MD as well as performing mesh hernioplasty in same sitting in selected cases.

CONCLUSION: Clinical features of Littre's hernia and other inguinal hernias are same making it difficult to diagnose preoperatively unless complications occurs. It is advisable that in cases of irreducible hernias surgeon should suspect possibility of presence of MD. USG can be used as an adjunct in the evaluation of irreducible hernias. The incidence of potential lifelong complications of Meckel's is 5-6% in comparison to complication associated with resection of asymptomatic Meckel's as prophylactic surgery is 1% so in an era of safe anaesthesia and safe surgical techniques it is wise to go ahead with resection in selective patients who are hemodynamically stable and without any co-morbidities.

KEYWORDS : Inguinal hernia, Littre's hernia, Meckel's diverticulum.

INTRODUCTION

Johann Friedrich Meckel was the person who described the embryological origin of MD. Early in embryonic life the fetal midgut receives its nutrition from the yolk sac via the vitelline duct that later on undergoes progressive narrowing and disappears by 7th week of gestation (1). Failure of the complete obliteration of this can lead to various anomalies, MD is one of them. The prevalence of MD is reported to range between 0.2-4%. (2)

A MD is a true diverticulum of small intestine containing all three layers and it can have tissues left over during formation of the digestive tract and its organ and can be a potential site for heterotopic gastric, pancreatic or less commonly duodenal, colonic or biliary mucosa. Heterotopic tissue of gastric, duodenal, pancreatic, or colonic morphology in Meckel's has been reported to occur in 6-17%. A MD is usually located on the anti-mesenteric border of the distal small intestine. (3,9)

The MD can remain asymptomatic throughout life or else can present with complications (3.7-6.4%) as hemorrhage, mechanical intestinal obstruction, intussusception, perforation, diverticulosis, umbilico-enteric fistula, foreign bodies, peptic ulcer disease site for neoplasms benign as well as malignant and Littre's hernia. (3,4)

Littre's hernia is characterized by MD in hernia sac located in one of the inguinal, femoral, ventral, sciatic and lumbar regions (7). Originally Littre's hernia was described in femoral hernia but 50% of MD are found in inguinal hernias, 20% of femoral, 20% of umbilical and remaining 10% in miscellaneous hernias. (5)

The complicated hernia is called Littre's hernia, named after Alexis Littre a French anatomist and surgeon who discovered the condition in 1700 in three of femoral hernias. Littre's hernias are rare and develop usually in inguinal hernias as compared to other abdominal wall hernias. (6)

CASE REPORT

We are reporting a case of 55 years old gentleman presented with reducible swelling in right inguino-scrotal region for past 10 months. Initially swelling used to come on coughing or on any strenuous activity and disappeared on lying down. Patient was having heaviness in scrotum and slight difficulty on walking. Slowly the swelling became partially irreducible. There was no history of chronic

constipation, chronic cough or any urinary complaint. On clinical examination diagnosis of Right sided irreducible inguinal hernia was made. Patient was worked up and planned for elective open mesh hernioplasty as patient was not willing for laparoscopic approach. On the day of surgery Spinal anaesthesia was given to the patient and right inguinal incision was given External oblique aponeurosis was incised and the cord was bulky due to indirect hernial sac contents. Sac was so full of contents that we were not able to separate from cord structures. Sac was opened which was having small bowel loops we pulled the bowel loops out and were surprised to see the tubular structure coming out of hernia sac, it was MD. There were no adhesions, no signs of inflammation, on palpation there was nothing suggestive of heterotopic mucosa. But the question was that what is to be done with Meckel's now. The Meckel's was 8cm long and 1.8 cm wide. We decided to go ahead with wedge resection of MD and primary suturing and mesh repair using polypropylene mesh with Lichtenstein tensionless repair with inguinal incision. No abdominal or inguinal drain was used. Patient was allowed oral sips from 4th post-operative day and subsequently semisolid food was given and discharged on 7th post-operative day. Patient is under follow up for past two years and doing well.

DISCUSSION

Preoperative diagnosis of presence of MD is not amenable to clinical examination and imaging studies. There have been great innovations in abdominal imaging in recent past but still there is no such investigation which can clearly demonstrate the MD which is the most common congenital abnormality in GI tract. Meckel's must be considered in all cases of intra-abdominal disease in which the cause is not readily apparent. (3)

Plain radiography, barium studies, angiography, CT scan, USG, Scintigraphy all play complementary roles in the diagnosis of the complications of MD. Findings of MD are nonspecific on all imaging modalities and they are mostly found on intra-operatively or on autopsy. The most sensitive technique remains the scintigraphy and various modifications have been devised to improve the sensitivity. (8) Clinical features of Littre's hernia and other hernias are almost same so it is very difficult to diagnose preoperatively unless complications or inflammation sets in. One may not find any specific signs of bowel involvement except local inflammation surrounding the sac until an enterocutaneous fistula develops. (6) It is advisable that surgeon should keep in mind the probability of Littre's hernia in cases of

irreducible hernias and USG can be used as an adjunct to evaluation of contents.

Once asymptomatic MD is found in hernia sac it should be thoroughly evaluated to anticipate future complication. In our case the patient was 55 years of gentleman without any co morbidities so we decided for resection to combat with subsequent problems. The rate of complication of MD if happens are perforation (71.4%), mechanical bowel obstruction (21.4%) and invagination (7.2%). In old age bowel perforation leads to significant morbidity and mortality. Surgical options available are diverticulectomy, segmental bowel resection, partial bowel resection and sometimes even hemicolectomy and ileotransversestomy. (4,5,7)

As far as open versus laparoscopic method for surgery is concerned it depends on the choice and expertise of operating surgeon and can be superior to open in selected cases. MD with wide mouth can be left alone without causing increased problems in future. Resection of meckel's with mesh hernioplasty can be controversial but in our case it was elective surgery and resection was done in controlled manner so with good results.

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